Exercise Worksheet

Date
Page

1) Make a comparision and write down ways in which plant cells are different from animal cells.

Plant cell	Animal Cell
• Plant cells are usually larger than animal cells.	• Animal cells are generally small in size.
• Plant cells are usally rectangular in size.	• Animal cells are usually circular in size.
• Plant cells are covered by a cell wall made up of cellulose	• Animal cells lack cell wall.
• Large vacuoles are present in plant cells.	• Either very small or no vacuoles are present in animal cell
• Plastids are present in plant cell.	• Plastids are absent in animal cell
• Centrioles are absent in plant cell	• Centrioles are present in animal cell

- Cell division takes place by cell plate formation.

- Cell division takes place by constriction.

2) How is a prokaryotic cell different from eukaryotic cell?

Eukaryotic	Prokaryotic
Average size 10-100 u	Average size is 5-10 u.
Well defined nucleus is present.	Well defined nucleus is absent.
Cell organelles like golgi body, endoplasmic reticulum are present.	membrane bound cell organelles like golgi body, endoplasmic reticulum, plastid are absent
Complex in structure	Simple in structure
Contains more than 1 chromosome.	Contains only one chromosome
Ex → All cells other than some.	Ex → Blue green algae, and bacterias.
Ex → Amoeba, RBC, WBC	

3) what would happen if plasma membrane ruptures ?

If the plasma membrane of a cell ruptures then the following would happen

⇒ As plasma membrane is a selectively permeable membrane so on its rupturing along with needed products such as O_2, waste products like CO_2, chemical ions like sugar solid biomolecules, may also enter the cell

⇒ Plasma membrane also seperates inner content of the cell from external enviornment. So on its rupturing the protoplasm would get mixed with the external enviornment & the cell would die.

4) what would happen if there was no golgi body ?

If there was no golgi body in a cell then the following would happen :-

- Various synthesised materials like proteins, lipids cannot be packaged and dispatched to various targets inside and outside of the cell.

• Golgi body also helps in formation of lysosome so if the golgi body is absent then there will be no formation of lysosomes for which worn out cell organelles would get accumulated and also the food and foreign materials would not get digsted for which the cell will die.

5) Which organelle is known as powerhouse of cell? Why?

Mitochondria is known as powerhouse of cell. because they oxidises the food and thereby provides energy to the cell in form of ATP.

6) Where do the lipids and proteins constituting of the cell membrane gets synthesised.?

Lipids and proteins constituting of the cell membrane are synthesid in endoplasmic reticulum. Lipids are synthesised in smooth endoplasmic reticulum and proteins are synthesised in rough endoplasmic reticulum.

7) How does an Amoeba obtain food.

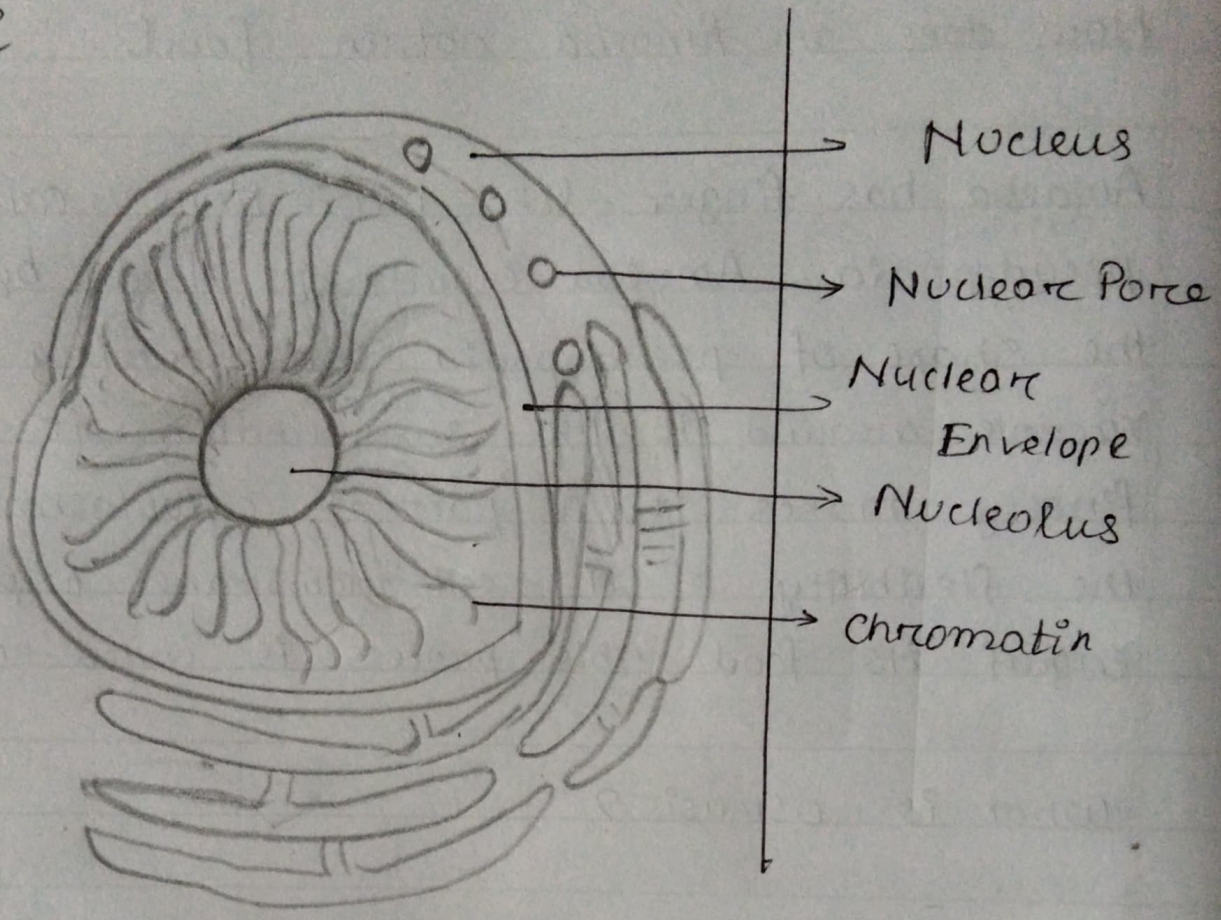
Amoeba has finger - like projections called pseudopodia. Amoeba engulfs its food by changing the shape of pseudopodia and forming a vacuole around it Or surrounding it and finally makes it a part of cytoplasm. Thus the flexibility of its cell membrane helps it to engulf its food. This process is called endocytosis.

8) What is osmosis?

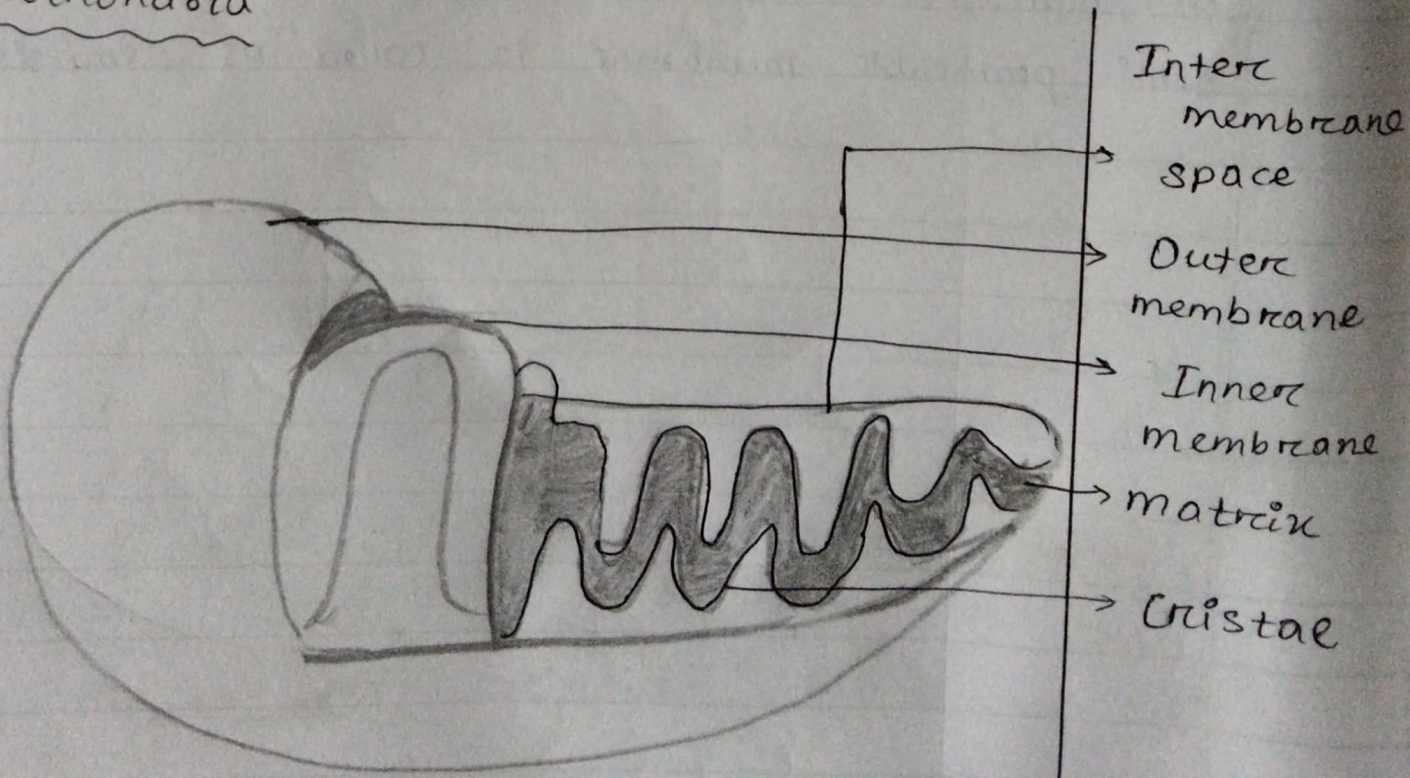
The movement of solvent like water from region of high concentration to low concentration through semi- permeable membrane is called as osmosis

Diagram Of Cell Organelles

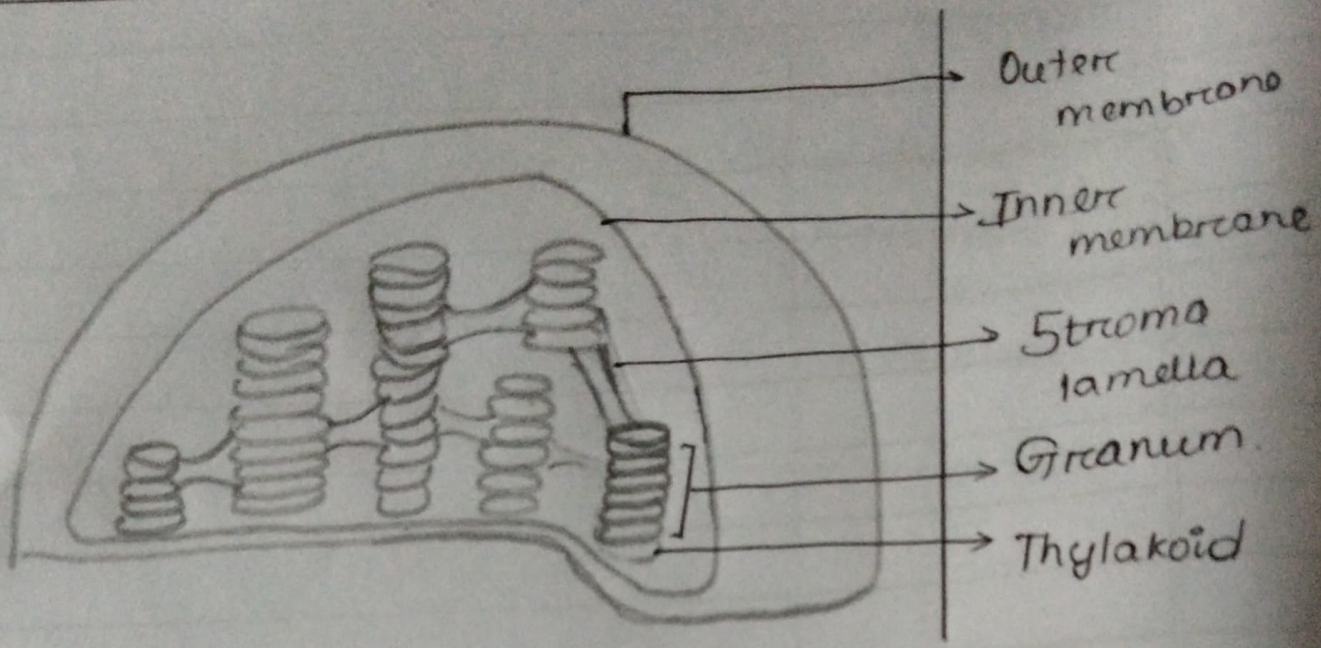
Nucleus



Mitochondria



Chloroplast



Golgi Apparatus